

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-58. (Cancelled)

59. (New) An isolated Nod-factor binding polypeptide comprising:
at least 80% amino acid sequence identity any one of SEQ ID NO: 8, 15, 31, 32, 40, or 48
, wherein said polypeptide comprises an extracellular domain comprising 2 or 3 different LysM-type motifs, and wherein said polypeptide selectively binds strain-specific forms of Nod-Factor.

60. (New) An isolated Nod-factor binding polypeptide comprising:
at least 80% amino acid sequence identity to any one of SEQ ID NO: 24, 25, 52, or 54; and
wherein said polypeptide comprises an extracellular domain comprising 2 or 3 different LysM-type motifs, and wherein said polypeptide selectively binds strain-specific forms of Nod-Factor.

61. (New) The isolated Nod-factor binding polypeptide of **claim 59**, wherein said polypeptide comprises the amino acid sequence of any one of SEQ ID NO: **8, 15, 31, 32, 40, or 48.**

62. (New) The isolated Nod-factor binding polypeptide of **claim 60**, wherein said polypeptide comprises the amino acid sequence of any one of SEQ ID NO: **24, 25, 52, or 54.**

63. (New) An isolated Nod-factor binding element comprising one or more isolated Nod-factor binding polypeptide of **claim 59**, and further comprising one or more isolated Nod-factor binding polypeptide comprising **at least 80%** amino acid sequence identity to any one of SEQ ID NO: **24, 25, 52, or 54**; and wherein said polypeptide comprises an extracellular domain comprising 2 or 3 different LysM-type motifs, and wherein said polypeptide selectively binds strain-specific forms of Nod-Factor.
64. (New) An isolated Nod-factor binding element comprising one or more isolated Nod-factor binding polypeptide of **claim 61**, and further comprising one or more polypeptide comprising the amino acid sequence of any one of SEQ ID NO: **24, 25, 52, or 54**.
65. (New) An isolated nucleic acid molecule encoding the Nod-factor binding protein of **claim 59**.
66. (New) An isolated nucleic acid molecule encoding the Nod-factor binding protein of **claim 60**.
67. (New) The isolated nucleic acid molecule of **claim 65**, wherein said nucleic acid molecule comprises the nucleotide sequence of SEQ ID NO: **6, 7, 11, 12, 30, 39, or 47**.
68. (New) The isolated nucleic acid molecule of **claim 66**, wherein said nucleic acid molecule comprises the nucleotide sequence of SEQ ID NO: **21, 22, 23, 51, or 53**.
69. (New) A transgenic cell stably transformed with one or more nucleic acid molecule encoding the Nod-factor binding protein of **claim 59**.
70. (New) The transgenic cell of **claim 69**, wherein said nucleic acid molecule encodes a polypeptide having the sequence of SEQ ID NOS: **8, 15, 31, 32, 40, or 48**.

71. (New) The transgenic cell of **claim 69**, wherein said nucleic acid molecule comprises the sequence of SEQ ID NOS: **6, 7, 11, 12, 30, 39, or 47**.

72. (New) A transgenic cell stably transformed with one or more nucleic acid molecule encoding the Nod-factor binding protein of **claim 60**.

73. (New) The transgenic cell of **claim 72**, wherein said nucleic acid molecule encodes a polypeptide having the sequence of SEQ ID NOS: **24, 25, 52, or 54**.

74. (New) The transgenic cell of **claim 72**, wherein said nucleic acid molecule comprises the sequence of SEQ ID NOS: **21, 22, 23, 51, or 53**.

75. (New) A transgenic cell comprising one or more transgene encoding the Nod Factor binding element of **claim 63**.

76. (New) A transgenic cell comprising one or more transgene encoding the Nod Factor binding element of **claim 64**.

77. (New) The transgenic cell of **claim 69**, wherein said cell is a plant cell.

78. (New) The transgenic cell of **claim 70**, wherein said cell is a plant cell.

79. (New) The transgenic cell of **claim 71**, wherein said cell is a plant cell.

80. (New) The transgenic cell of **claim 72**, wherein said cell is a plant cell.

81. (New) The transgenic cell of **claim 73**, wherein said cell is a plant cell.

82. (New) The transgenic cell of **claim 74**, wherein said cell is a plant cell.

83. (New) The transgenic cell of **claim 75**, wherein said cell is a plant cell.

84. (New) The transgenic cell of **claim 76**, wherein said cell is a plant cell.

85. (New) A method of producing a transgenic plant expressing a Nod-factor binding protein, the method comprising:

- a. introducing into the plant a nucleic acid molecule encoding one or more Nod-factor binding polypeptide of **claim 59**, wherein the nucleic acid sequence is operably linked to a promoter; and
- b. selecting transgenic plants expressing the Nod-factor binding protein.

86. (New) The method of **claim 85**, wherein said nucleic acid molecule encodes a polypeptide having the amino acid sequence of SEQ ID NO: **8, 15, 31, 32, 40, or 48**.

87. (New) The method of **claim 85**, wherein said nucleic acid molecule comprises the sequence of SEQ ID NO: **6, 7, 11, 12, 30, 39, or 47**.

88. (New) A method of producing a transgenic plant expressing a Nod-factor binding protein, the method comprising:

- a. introducing into the plant a nucleic acid molecule encoding one or more Nod-factor binding polypeptide of **claim 60**, wherein the nucleic acid sequence is operably linked to a promoter; and
- b. selecting transgenic plants expressing the Nod-factor binding protein.

89. (New) The method of **claim 88**, wherein said nucleic acid molecule encodes a polypeptide having the amino acid sequence of SEQ ID NO: **24, 25, 52, or 54**.

90. (New) The method of **claim 88**, wherein said nucleic acid molecule comprises the sequence of SEQ ID NO: **21, 22, 23, 51, or 53**.

91. (New) The method of **claim 85**, further comprising introducing into the plant one or more nucleic acid molecule encoding the Nod-factor polypeptide of **claim 60**.

92. (New) The method of **claim 86**, comprising:

introducing into the plant one or more nucleic acid molecule encoding a polypeptide having the amino acid sequence of SEQ ID NO: **8, 15, 31, 32, 40, or 48**; and further introducing into the plant one or more nucleic acid molecule encoding a polypeptide having the amino acid sequence of SEQ ID NO: **24, 25, 52, or 54**.

93. (New) The method of **claim 92**, comprising introducing into the plant one or more nucleic acid sequence comprising **SEQ ID NO: 6, 7, 11, 12, 30, 39, or 47**; and further introducing one or more nucleic acid sequence comprising **SEQ ID NO: 21, 22, 23, 51, or 53**.

94. (New) The method of **claim 85**, wherein one or more nucleic acid sequence is introduced into the plant through a sexual cross.

95. (New) The method of **claim 88**, wherein one or more nucleic acid sequence is introduced into the plant through a sexual cross.

96. (New) The method of **claim 91**, wherein one or more nucleic acid sequence is introduced into the plant through a sexual cross.

97. (New) The method of **claim 93**, wherein one or more nucleic acid sequence is introduced into the plant through a sexual cross.

98. (New) A transgenic plant comprising one or more transgene encoding the Nod-factor binding polypeptide of **claim 59**.

99. (New) The transgenic plant of **claim 98**, wherein the polypeptide comprises the amino acid sequence of **SEQ ID NO: 8, 15, 31, 32, 40, or 48**.

100. (New) A transgenic plant comprising one or more transgene encoding the Nod-factor binding polypeptide of **claim 60**.
101. (New) The transgenic plant of **claim 100**, wherein the polypeptide comprises the amino acid sequence of SEQ ID NO: **24, 25, 52, or 54**.
102. (New) A transgenic plant comprising one or more transgene encoding the Nod-factor binding element of **claim 63**.
103. (New) A transgenic plant comprising one or more transgene encoding the Nod-factor binding element of **claim 64**.
104. (New) The transgenic plant of **claim 98**, wherein said plant is a cereal.
105. (New) The transgenic plant of **claim 99**, wherein said plant is a cereal.
106. (New) The transgenic plant of **claim 100**, wherein said plant is a cereal.
107. (New) The transgenic plant of **claim 101**, wherein said plant is a cereal.
108. (New) The transgenic plant of **claim 102**, wherein said plant is a cereal.
109. (New) The transgenic plant of **claim 103**, wherein said plant is a cereal.
110. (New) The transgenic plant of **claim 98**, wherein said plant is a cereal.
111. (New) The transgenic plant of **claim 99**, wherein said plant is a cereal.
112. (New) The transgenic plant of **claim 100**, wherein said plant is a legume.
113. (New) The transgenic plant of **claim 101**, wherein said plant is a legume.
114. (New) The transgenic plant of **claim 102**, wherein said plant is a legume.

- 115. (New) The transgenic plant of **claim 103**, wherein said plant is a legume.
- 116. (New) The transgenic plant of **claim 98**, wherein said plant is a non-nodulating plant.
- 117. (New) The transgenic plant of **claim 99**, wherein said plant is a non-nodulating plant.
- 118. (New) The transgenic plant of **claim 100**, wherein said plant is a non-nodulating plant.
- 119. (New) The transgenic plant of **claim 101**, wherein said plant is a non-nodulating plant.
- 120. (New) The transgenic plant of **claim 102**, wherein said plant is a non-nodulating plant.
- 121. (New) The transgenic plant of **claim 103**, wherein said plant is a non-nodulating plant.